of the monocolumn (**22**), in a manner which allows both rotational and vertical movement between the monocolumn (**22**) and the truss section (**50**). This essentially creates a pin connection between the truss (**50**) and the monocolumn (**22**), and so isolates the truss from torsion and bending forces due to the motion of the monocolumn (**22**) relative to original structure (**10**).

[0049] Even though the extension (**20**) and original structure (**10**) share the same foundations, the monocolumn (**22**) and the original structure (**10**) will be subject to differing forces, due to waves or vessel impact for example. As such, the monocolumn (**22**) may twist and/or bend relative to the original structure (**10**).

[0050] The bearing joint (**60**) is shown in more detail in FIG. **6**. Support post (**26**) of the monocolumn extension (**20**) is surrounded by cylindrical bushing (**63**). The bushing (**63**) is attached to the support column (**26**) via grouting (**64**), such that the bushing is held substantially motionless with respect to the support column (**26**).

[0051] The grouting (**64**) between the bushing (**63**) and the support column (**26**) allows for some adjustment when positioning the bushing (**63**) on the support column (**26**). This is helpful when there are multiple bearing joints (**60**), as it allows the cylindrical bushings to be aligned substantially parallel with each other, thus facilitating the same movements occurring in the individual bearings at the same time.

[0052] A spherical bearing, comprising an outer bearing member (**61**) and an inner bearing (**62**) are positioned around the bushing (**63**). The inner surface of the inner bearing member (**62**) bears against the outer surface of the cylindrical bushing (**63**). The inner surface of the inner bearing element (**62**) is preferably of cylindrical shape. The inner bearing element (**62**) is thus able to move parallel to the cylindrical axis of the bushing (**63**) (i.e. moving from one end of the bushing (**63**) to the other) and is also able to rotate around the bushing (**63**) (i.e. within a plane perpendicular to the cylindrical axis of the bushing (**63**). The bearing surfaces are lubricated in order to provide very low friction surfaces. The surfaces are the inner surface of the inner bearing element (**62**) and the outer surface of the bushing (**63**). Similarly, it is desirable to lubricate the outer surface of the inner bearing element (**62**) and the inner surface of the outer bearing element (**61**). Lubrication in the form of oil, grease, PTFE impregnated tape, for example, can be used.

[0053] The outer surface of the inner bearing element (**62**) is curved. The outer surface of the inner bearing element (**62**) bears against the outer bearing element (**61**). The outer bearing element has a bearing surface complimentary in shape to the outer bearing surface of the inner bearing element (**62**). Preferably, the outer bearing surface of the inner bearing element (**62**) is convex, and the bearing surface of the outer bearing element (**61**) is concave. Preferably, the outer bearing surface of the inner bearing element (**62**) is the surface of a spherical segment. That is, preferably the outer bearing surface of the inner bearing element (**62**) forms part of the surface of a sphere. This allows the greatest freedom of motion between the inner and outer bearing elements (**61**) and (**62**).

[0054] The spherical bearing (**61**) (**62**) allows for rotational movement between the truss section and the support column (**26**). As such, the combination of the spherical bearing and the bearing along the bushing (**63**) allows both rotational and translational movement between the truss (**50**) and the monocolumn (**22**), thus minimising the transmission of any torsional stresses into the truss (**50**) due to motion of the monocolumn (**22**).

[0055] The bearing elements (**61**) and (**62**) are housed within a housing comprising elements (**65**) and (**66**). Housing elements (**65**) and (**66**) are designed to slide together in a wedge formation in order to assist in positioning the bearing joint on the support column (**26**).

[0056] Due to the harsh environmental conditions experienced on offshore structures, the bearing joint (**60**) incorporates several measures in order to ensure that the bearing surfaces are kept clean. FIG. **7** shows a close up of one side of the bearing. As can be seen, housing elements (**67**) extend over and under the outer bearing element (**61**), towards the bushing (**63**). However, the housing elements (**67**) themselves do not touch the bushing (**63**). A lip seal (**68**) positioned at the end of each housing element (**67**) near the bushing (**63**) extends to contact the face of the bushing. The lip seal may be energised by incorporating a ring spring, to bias the seal against the bushing. Further, a void (**69**) is created between the lip seal (**68**) and the inner bearing element (**62**). This void can be filled with grease in order to assist in the prevention of contaminates reaching the low friction bearing surfaces between the inner bearing element (**62**) and the bushing (**63**), and also the inner bearing element (**62**) and the outer bearing element (**61**).

[0057] A further lip seal (**70**) is present at the outer edges of the inner bearing surface of the inner bearing element (**62**). Once again, this lip seal provides an additional barrier to any dirt or contaminants, thus allowing the bearing surface (**62**) to move as freely as possible over the bushing (**63**).

[0058] Similarly, measures are taken to maintain the integrity of the bearing surface between the inner bearing member (**62**) and the outer bearing member (**61**). A protective packing (**71**) is positioned between the housing element (**67**) and the bearing element (**61**) and (**62**). Protective packing (**71**) is positioned at the outer interface of the bearing surface between the two bearing elements, and forms a physical barrier to prevent any contaminants entering between the two bearing elements. Additionally, an O-ring (**72**) is positioned towards the edge of the bearing surface of the outer bearing element, to provide an additional barrier to any contaminants.

[0059] In addition to these precautions, taken close to the individual bearing faces, the housing is further sealed by a flexible rubber bellows material (**73**), thus providing an overall seal between the outermost housing element (**60**) and the support column (**26**). The flexible nature of the bellows seal (**73**) allows for the seal to be maintained even as the extension (**20**) and the truss (**50**) move relative to each (i.e. even as the bearing joints (**60**) move).

[0060] Either or both of the lip seals (**68**) and (**70**) may be biased towards the bushing (**63**) by the use of a ring spring, for example.

[0061] In use, the monocolumn (**22**) is vertically supported on the foundations (**40**) of the original structure (**10**). The monocolumn (**22**) directly contacts the foundation (**40**). That is, the monocolumn (**22**) rests on the foundation (**40**). The truss (**50**) provides a means for transferring any lateral loads from the monocolumn (**22**) (i.e. induced by wave motion) to the jacket (**12**) of the original structure, thus providing lateral support for the monocolumn (**22**). Because the truss (**50**) is rigidly fixed to the jacket (**12**) (for example by welding) the possibility of stresses being induced in the truss (**50**) due to vertical forces/displacement at the monocolumn connection